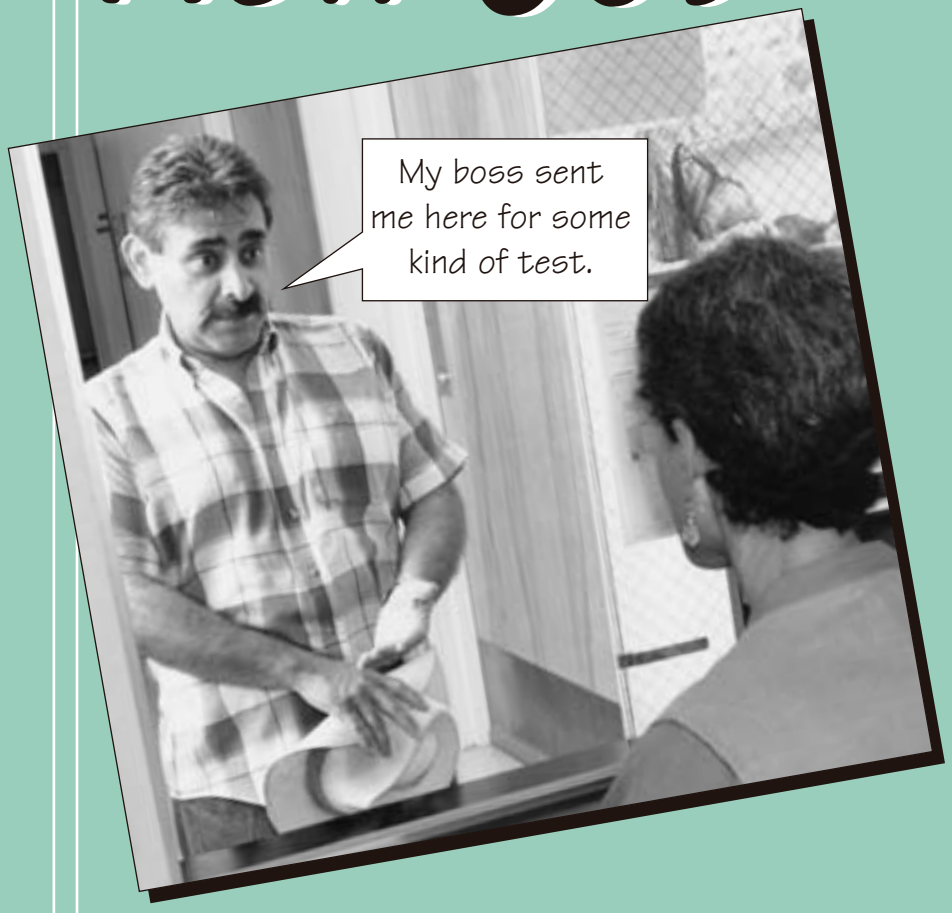
Jorge's New Job



Cholinesterase Testing in Washington State

Department of LABOR AND INDUSTRIES

F417-213-909 [07-2004]

Acknowledgments

The Washington State Department of Labor and Industries, WISHA Services Division, has received written permission from the University of California to modify the university's publication *Jorge's New Job* (ANR Publication #21507) for use in Washington State.

We wish to thank the University of California for granting this permission.

For information about ordering *Jorge's New Job* (California), write to:

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Oakland, CA 94608-1239

1-800-994-8849 (inside California)

510-642-2431 (outside California)

Assistance from the Washington Department of Labor and Industries

For more information about Washington State's cholinesterase monitoring rule, visit **www.LNI.wa.gov/Safety/Topics/AtoZ/** or call the L&I office nearest you. (Telephone numbers are listed in the government or white pages of telephone directories.)

For more information about *Jorge's New Job* (Washington, F417-213-909), call 1-800-423-7233 (1-800-4BE-SAFE). Or write to:

Training and Outreach Services
Department of Labor and Industries
PO Box 44641
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Jorge's New Job

The rule says that if I have you working with certain kinds of pesticides for extended periods, I have to provide blood tests.

Tests? You mean like more than ***one?***

Yes. You may need to get tested every 30 days. It depends on how much spraying you end up doing.

Next day Jorge goes to the clinic.

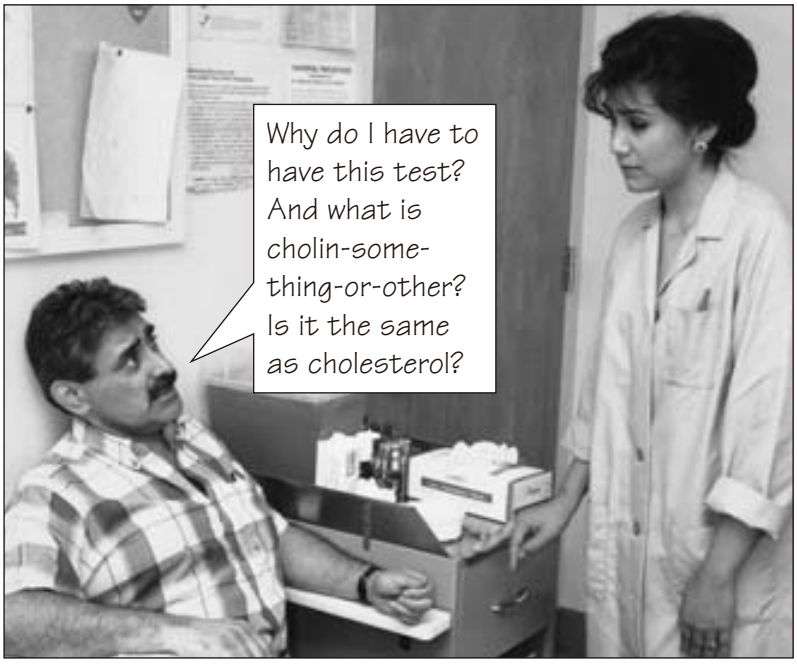
I'm Jorge Soto. My boss sent me here for some kind of blood test.

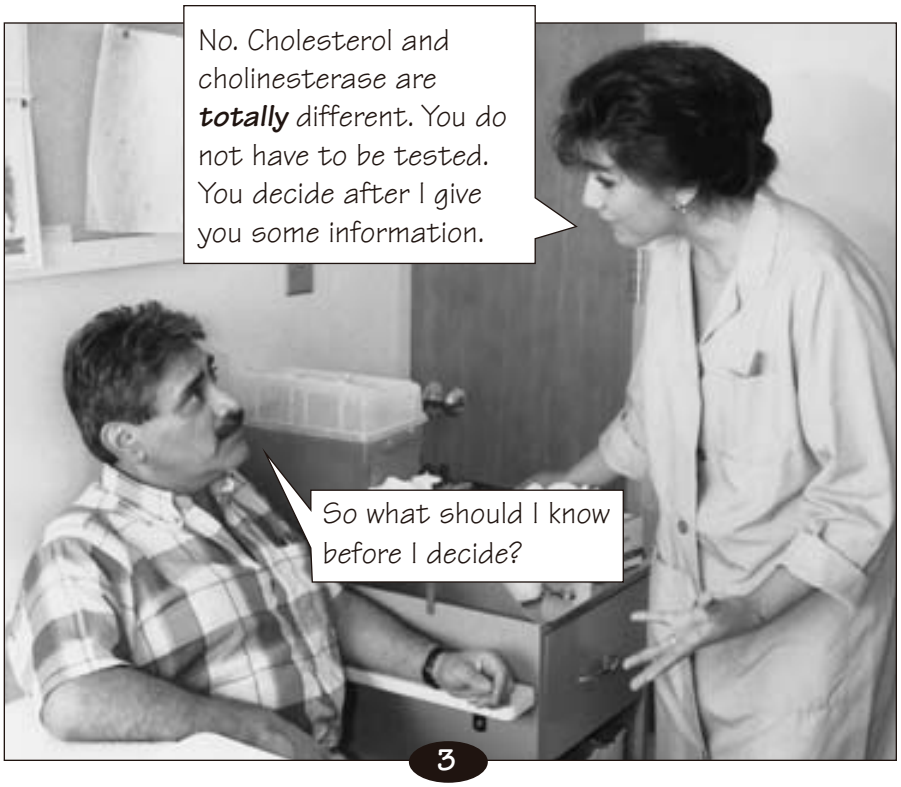
Oh, right. You're here for a cholinesterase test.

A *what?*

That's what it says here. The technician will explain more.

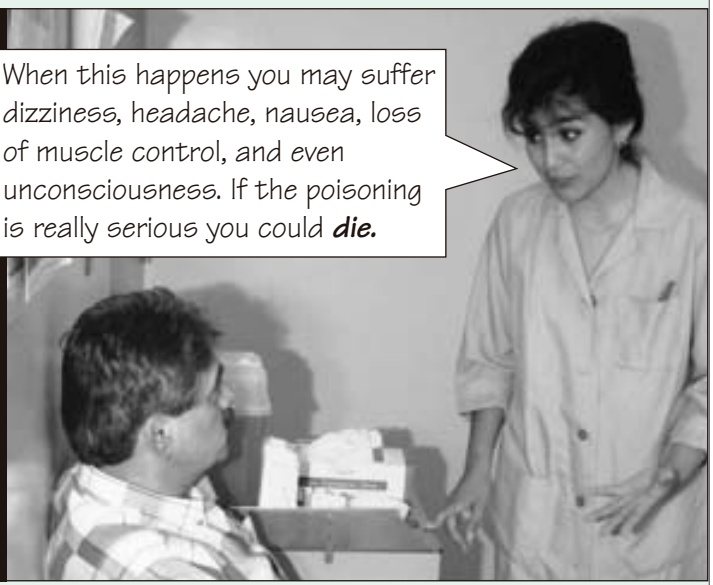
The receptionist sends Jorge back to the laboratory where he meets the technician.


Why do I have to have this test? And what is cholin-some-thing-or-other? Is it the same as cholesterol?


No. Cholesterol and cholinesterase are **totally** different. You do not have to be tested. You decide after I give you some information.
So what should I know before I decide?

Cholinesterase is a substance in your body that your nervous system needs to work right. Exposure to some kinds of pesticides reduces the amount of cholinesterase in your body.

Jorge suddenly seems more interested in what the technician is saying.

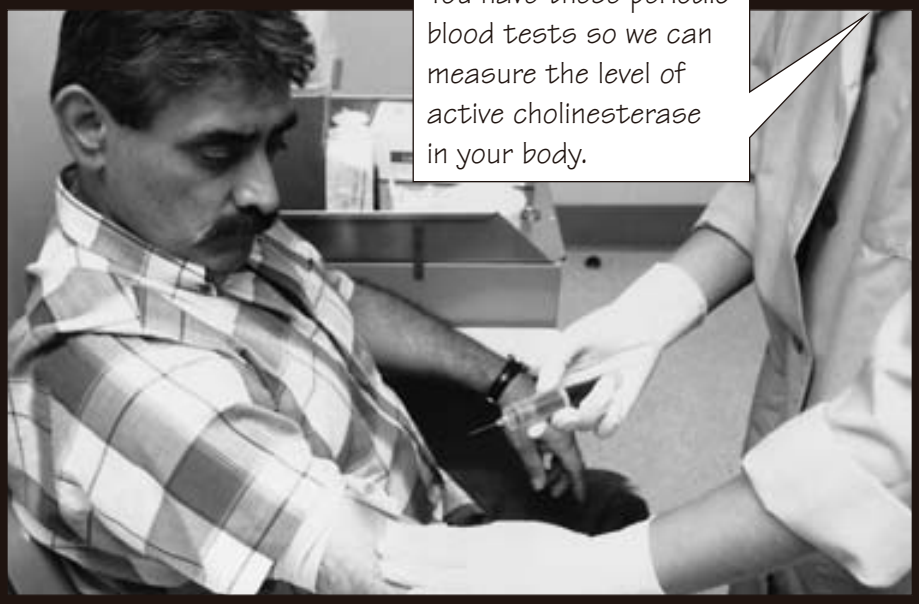


When this happens you may suffer dizziness, headache, nausea, loss of muscle control, and even unconsciousness. If the poisoning is really serious you could ***die.***

Since a lot of your cholinesterase has to stop working before you begin to feel sick, it might take several exposures before you started having symptoms. Of course one large exposure could do it, too.

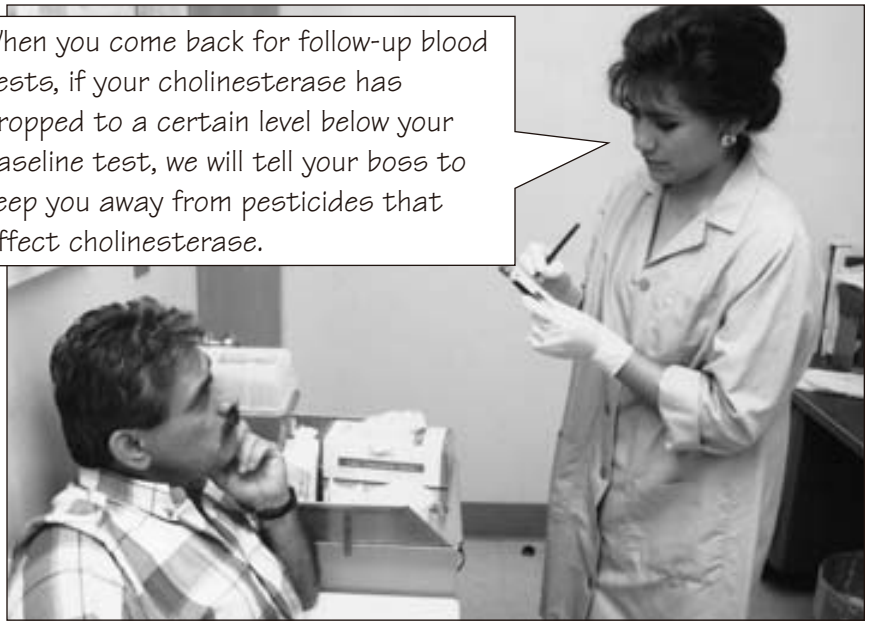
The test results can let us know if you've been exposed ***long before*** you get sick.

Jorge listens and watches carefully as the technician takes the blood sample.



This first blood test lets us know how much cholinesterase your body has normally—what we call your **baseline.** That's why we need to take a blood sample **before** you start working with cholinesterase-inhibiting insecticides.

When you come back for follow-up blood tests, if your cholinesterase has dropped to a certain level below your baseline test, we will tell your boss to keep you away from pesticides that affect cholinesterase.



In Washington State, employers have to follow our recommendations. Your boss has to pay your wages and benefits while you can't handle these pesticides.

Remember, your cholinesterase level could get very low without you feeling sick at all. But at some point, one additional exposure will be all it **takes to make you *seriously ill.***

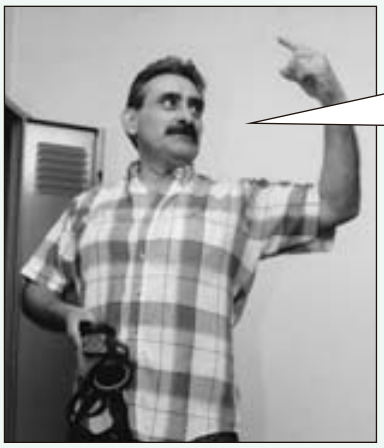
Fortunately, when you stop being exposed to these pesticides, your cholinesterase level will go back to normal, usually within one to three months, and you can go back to your regular job.

Once your cholinesterase activity is back to 80% of normal, you can begin to work with cholinesterase-inhibiting insecticides again.

But there is something you need to consider. If you come in for a blood test and your cholinesterase is low, something is probably wrong at work.

Maybe your employer is not providing you with the right kind of protective equipment or hasn't given you a clean place to wash up.

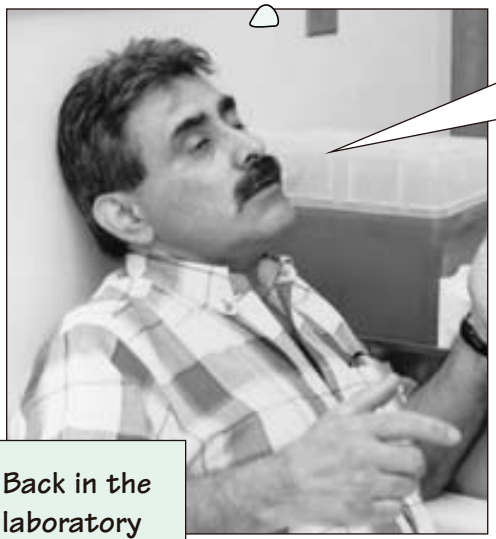
Or maybe you aren't using all the required protection or following safe work practices.



Whoa, wait a second. There are no cartridges in this respirator. Hey, boss . . .

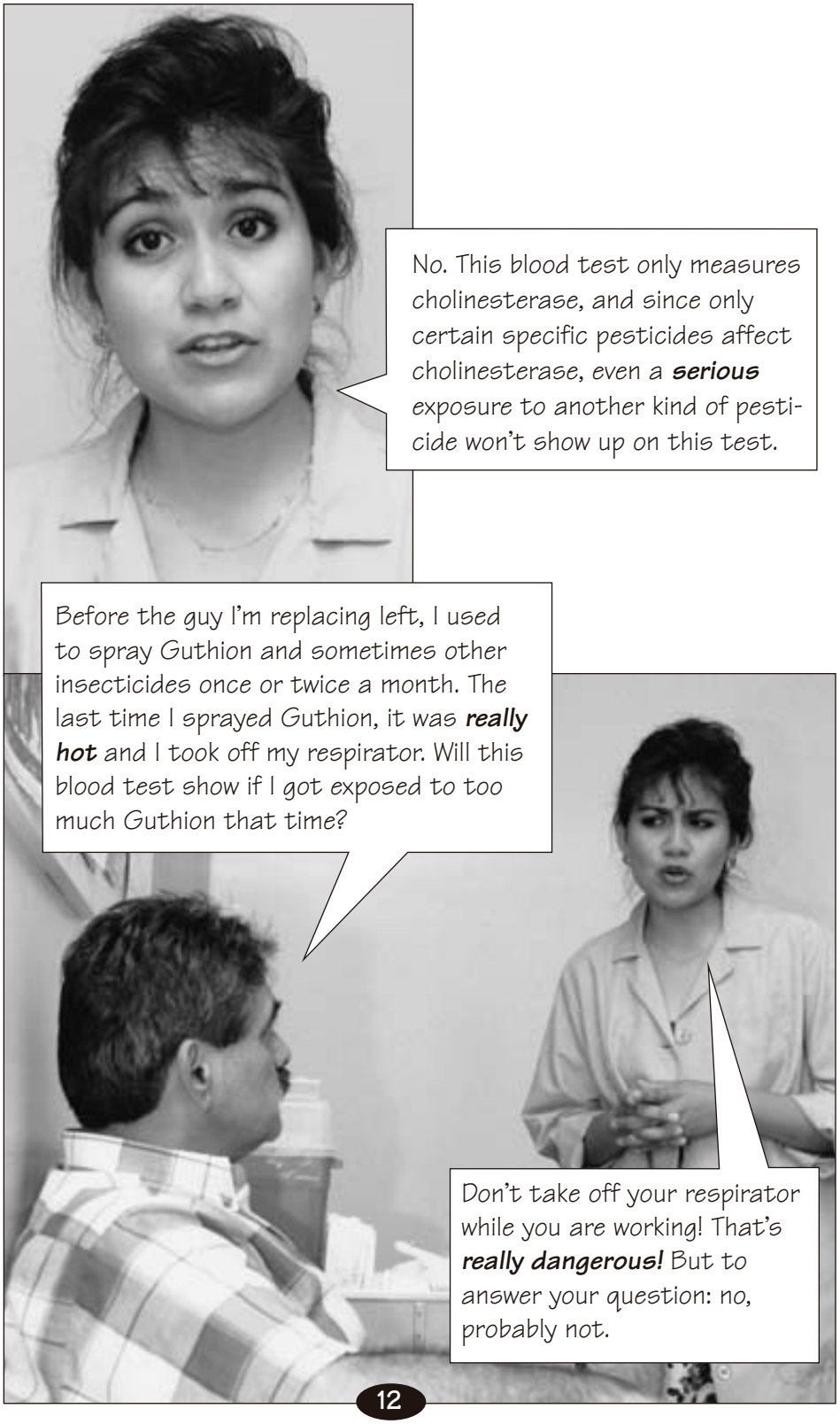
Oh right; I forgot to tell you. We keep the new cartridges in that cabinet over there.

Whatever your problem is, you and your boss should work together to figure out what needs to change in your work situation to keep you from getting exposed.



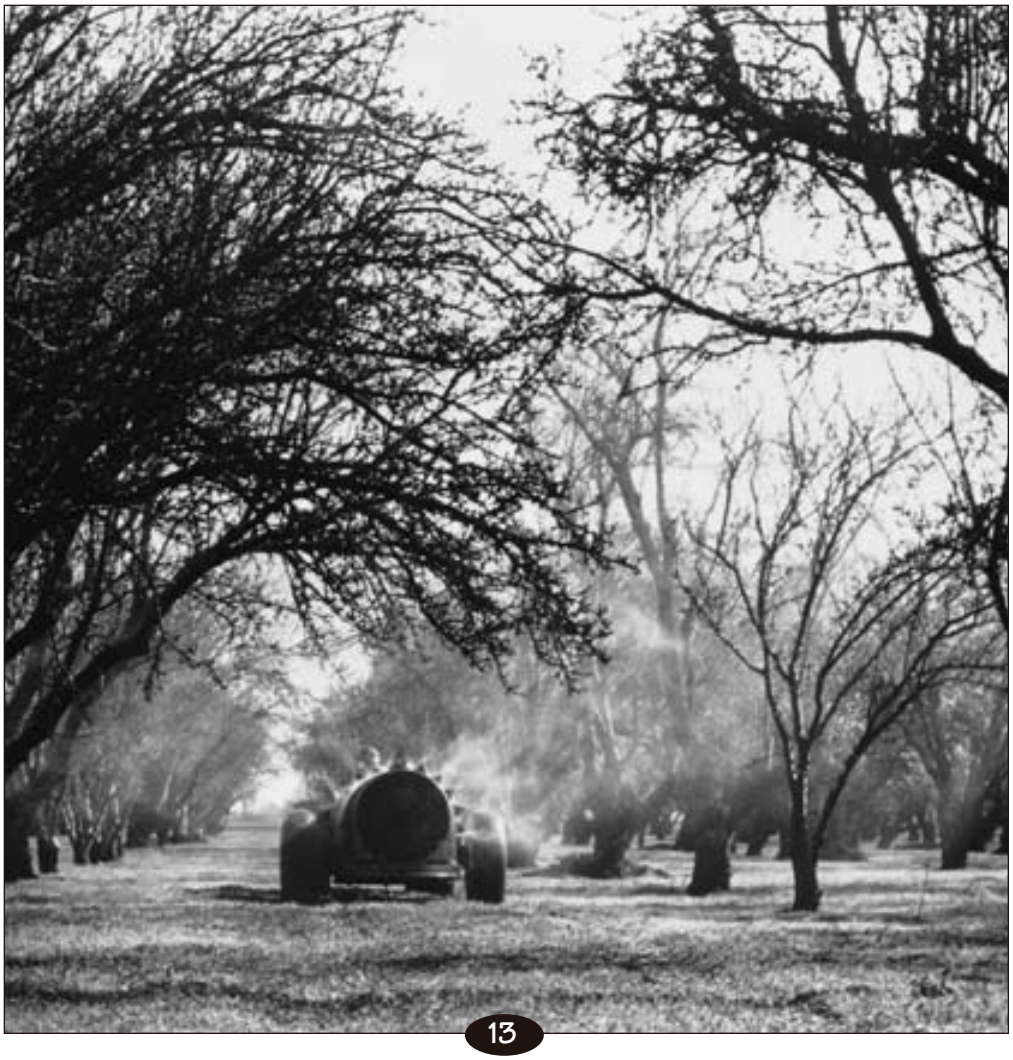
Yeah, I definitely plan to keep myself healthy. You know, I've been spraying weeds and using some fungicides at work. Will this blood test show if I've been exposed to too much of those kinds of pesticides?

Back in the laboratory


No. This blood test only measures cholinesterase, and since only certain specific pesticides affect cholinesterase, even a **serious** exposure to another kind of pesticide won't show up on this test.
Before the guy I'm replacing left, I used to spray Guthion and sometimes other insecticides once or twice a month. The last time I sprayed Guthion, it was **really hot** and I took off my respirator. Will this blood test show if I got exposed to too much Guthion that time?
Don't take off your respirator while you are working! That's **really dangerous!** But to answer your question: no, probably not.

Remember, when exposure to pesticides that affect cholinesterase has ended, your cholinesterase slowly returns to normal. So this blood test can't tell if you've been exposed in the past. It has to be a pretty recent exposure.

Cholinesterase testing can't tell you everything you need to know about your exposure to pesticides, but it can warn you if you are getting exposed to a harmful amount of some of them.



In Washington State, medical monitoring is required only for organophosphates or N-methyl-carbamate products with the signal words "DANGER" or "WARNING" (Toxicity Category I or II). Some examples of covered products are included in the following list. For a full list, go to the Washington State Department of Agriculture's pesticide web page: agr.wa.gov/PestFert/Pesticides/WorkerProtection.htm

organophosphates	**Signal Word**
azinphos-methyl	Danger
DDVP	Danger
Def	Danger
diazinon	Warning
Dibrom	Danger
dimethoate	Warning
Di-Syston	Danger
Dursban	Warning
Dylox	Warning
Folex	Danger
Guthion	Danger
Imidan	Warning
Lorsban	Warning
Meta Systox-R	Danger
methyl parathion	Danger
Mocap	Danger
Monitor	Danger
Nemacur	Danger
Supracide	Danger
Thimet	Danger

N-methyl carbamates	**Signal Word**
Baygon	Warning
Carzol	Danger
Furadan	Danger
Ficam	Warning
Lannate	Danger
Sevin	Warning
Temik	Danger
Vydate	Danger